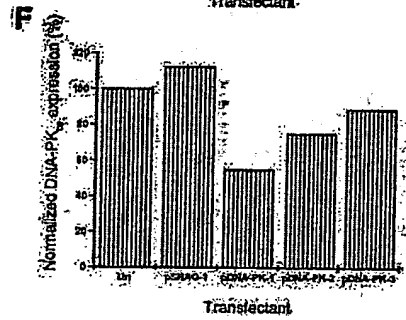
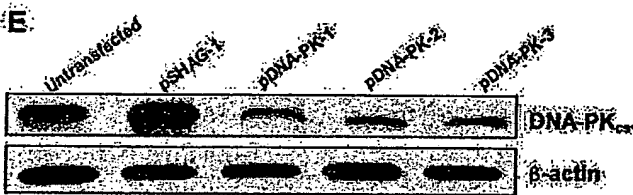
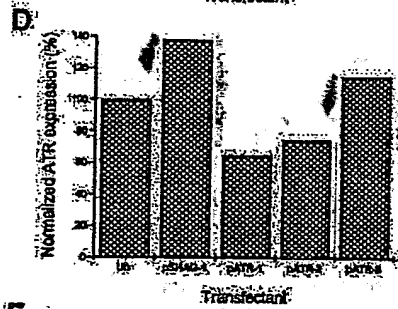
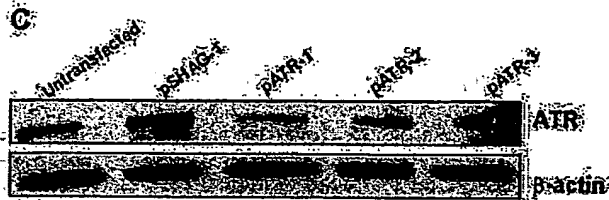
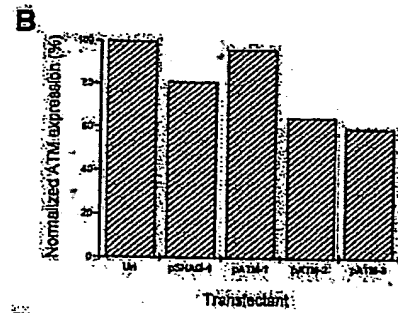


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Fig 2.

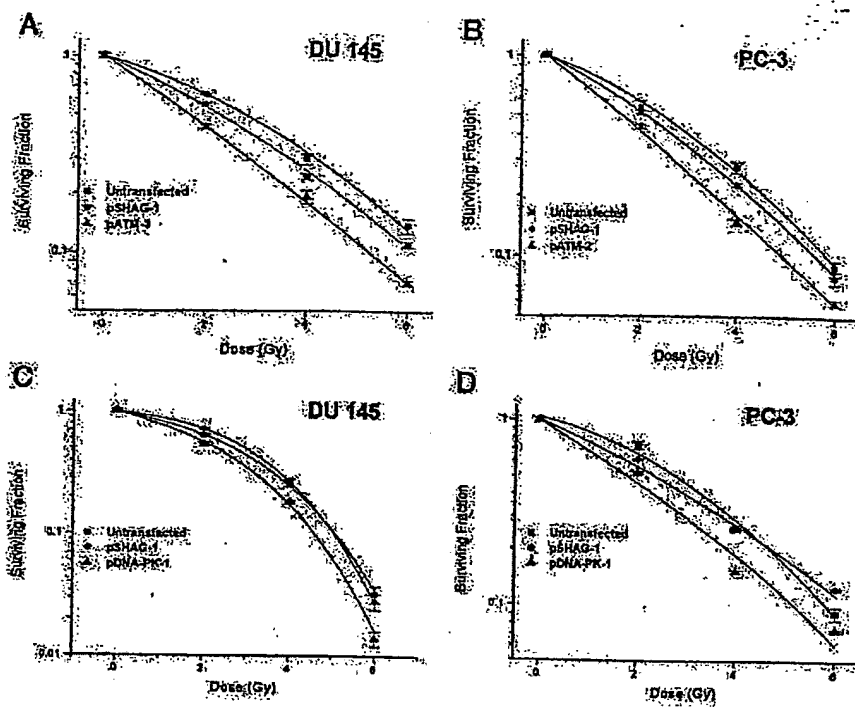


Fig. 3

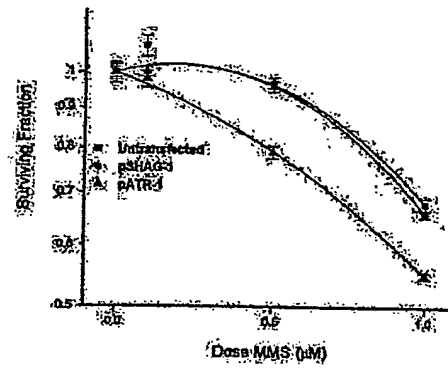
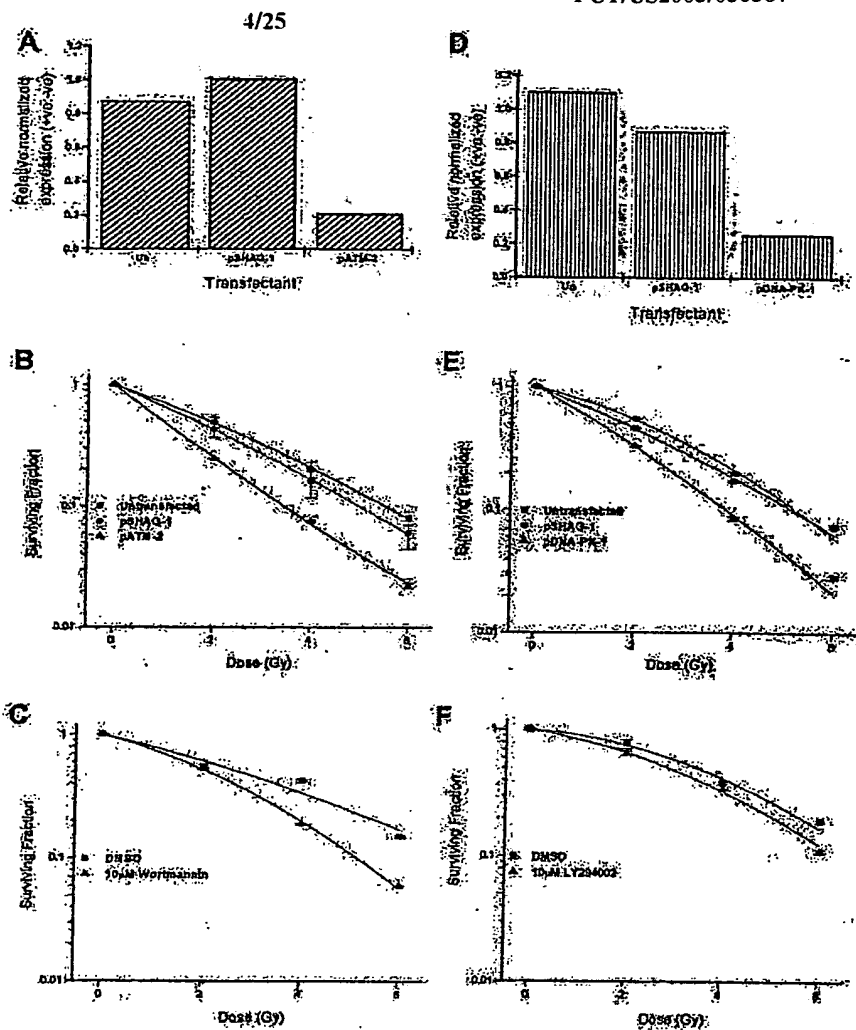


Fig. 4



# Ad5 siRNA (ERASE) vectors

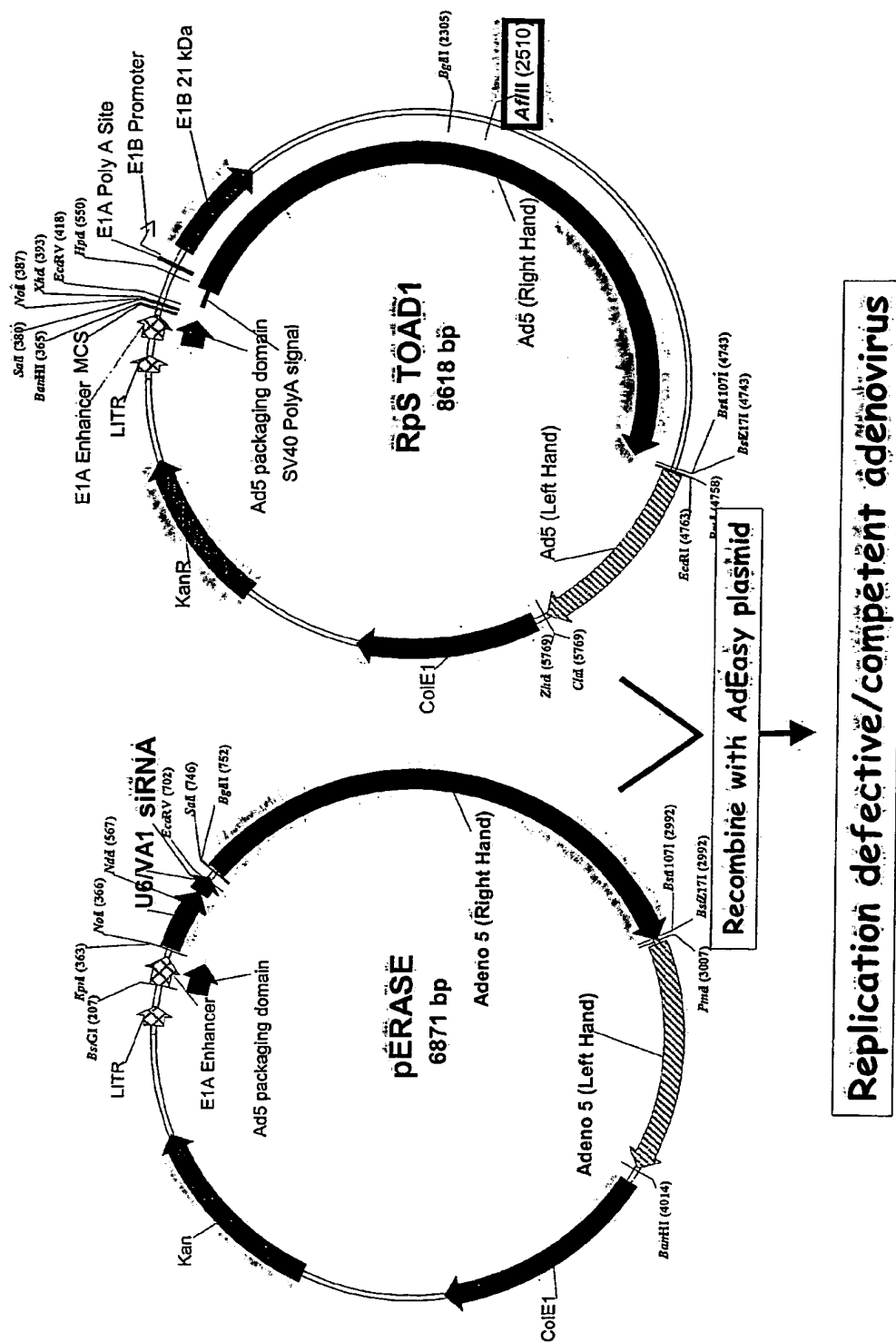


Fig. 6

# An alternative pol III promoter (synthetic VA1)

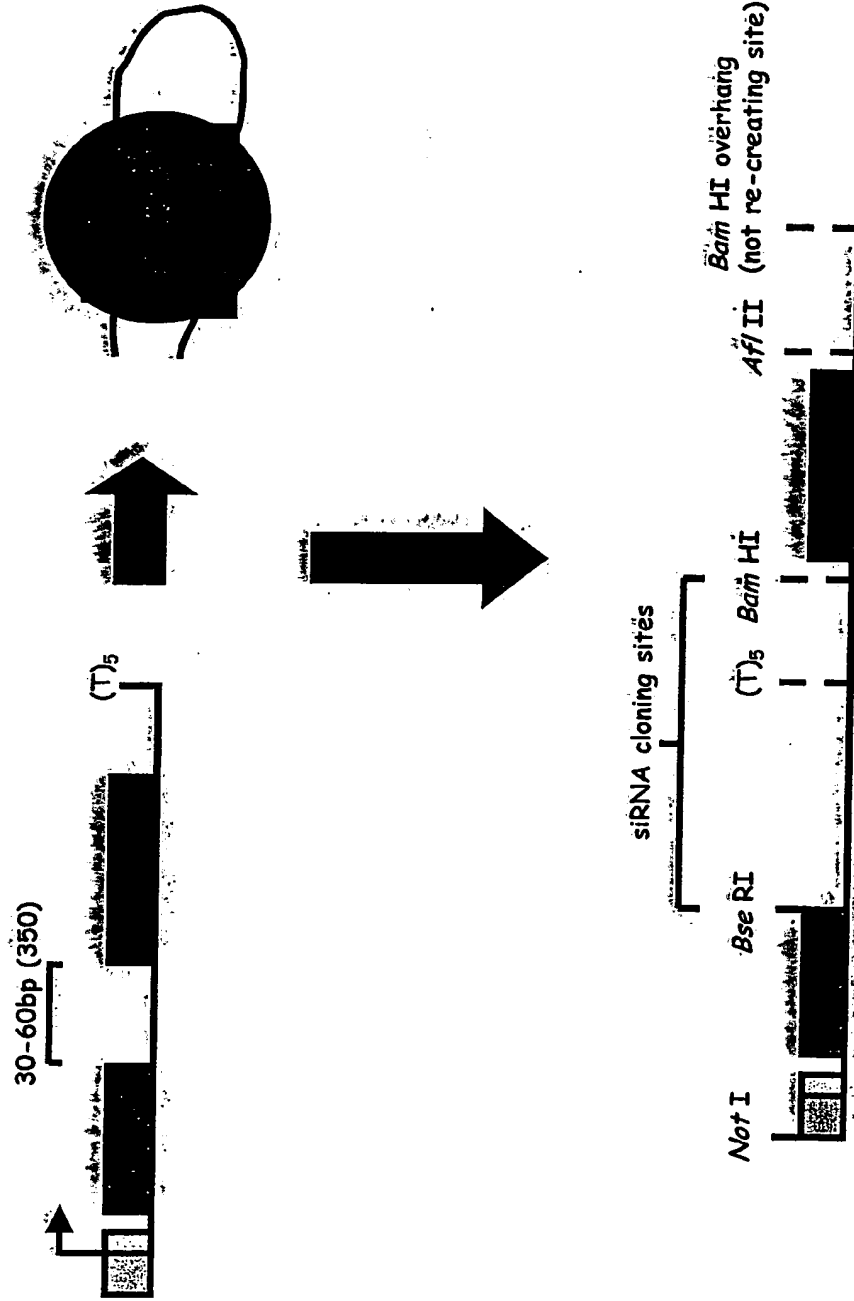


Fig. 7

# Effectiveness of VA1 promoter in PC-3 Luc cells

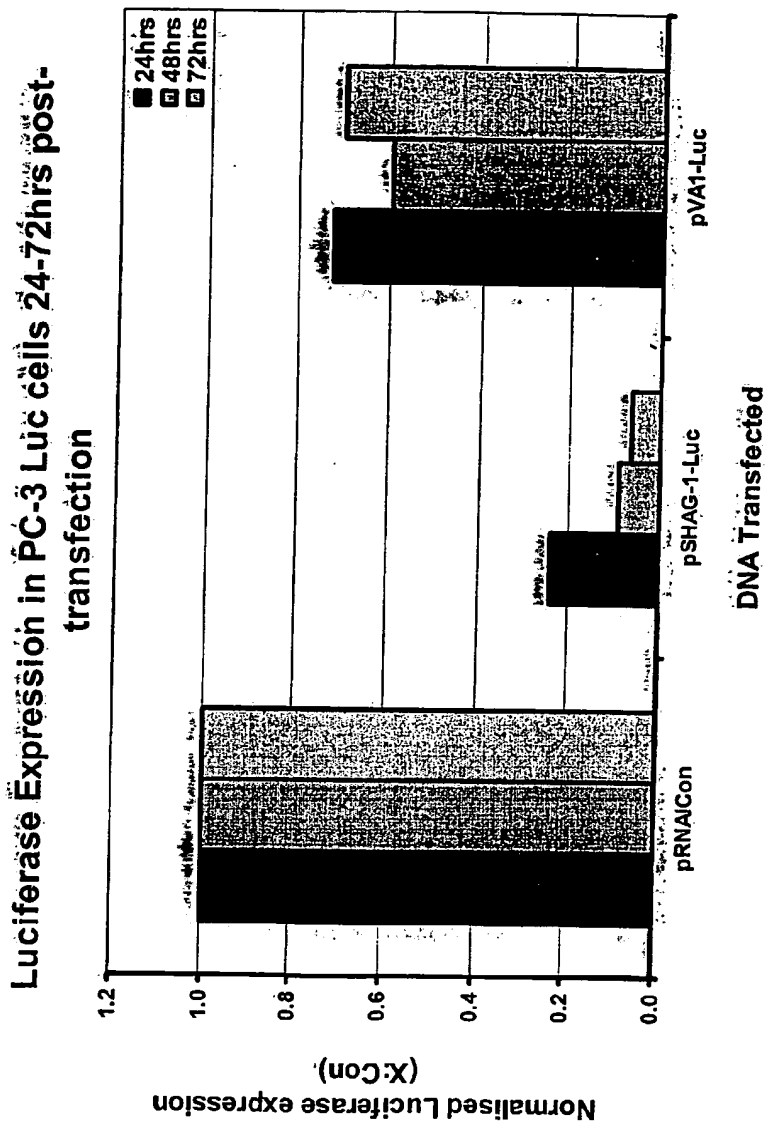


Fig. 8

# Effectiveness of VA1 promoter in 293 Luc cells

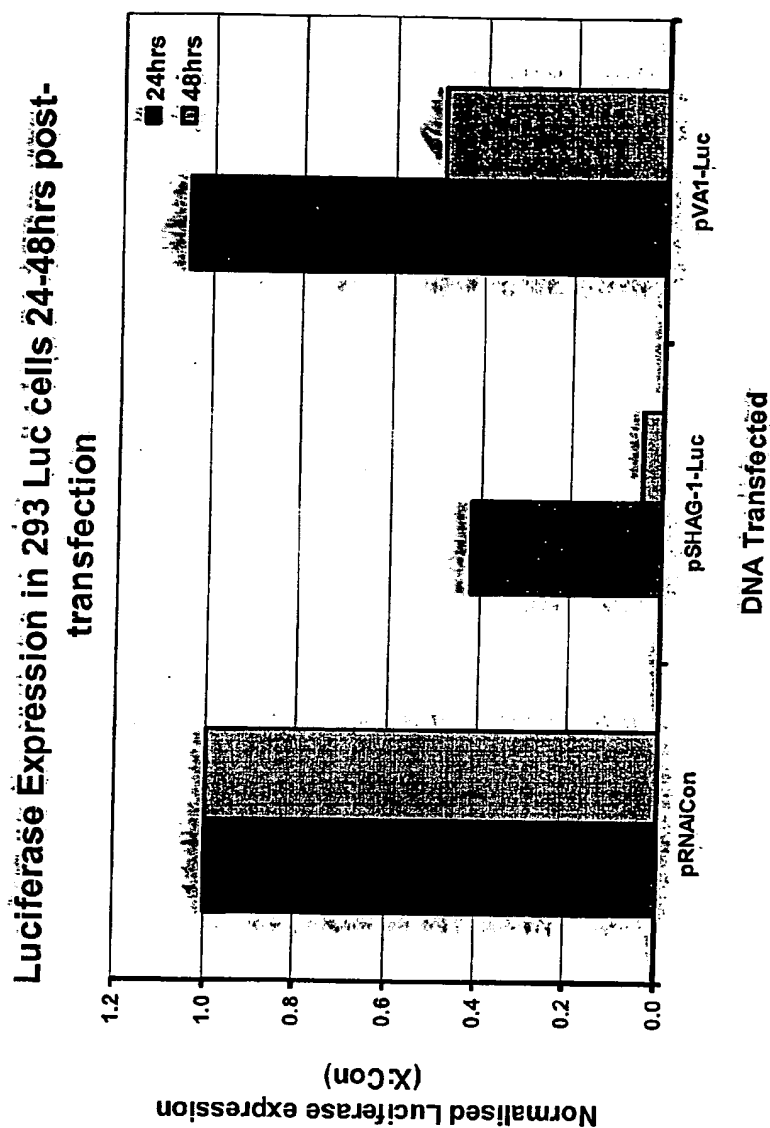




Fig. 9

# Effectiveness of VA1 promoter in DU 145 cells: co-transfection experiments

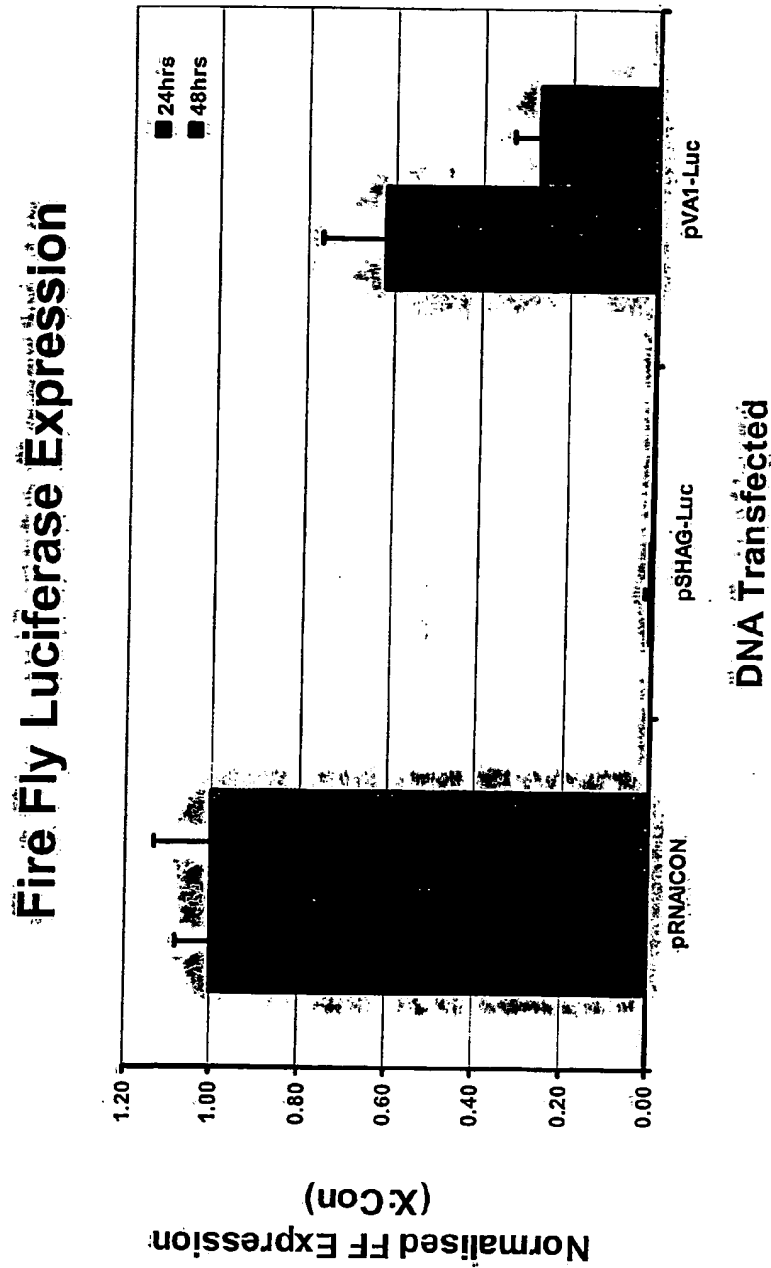


Fig. 10

# VA1 versus U6-mediated down-regulation of DNA-PK in DU 145 cells

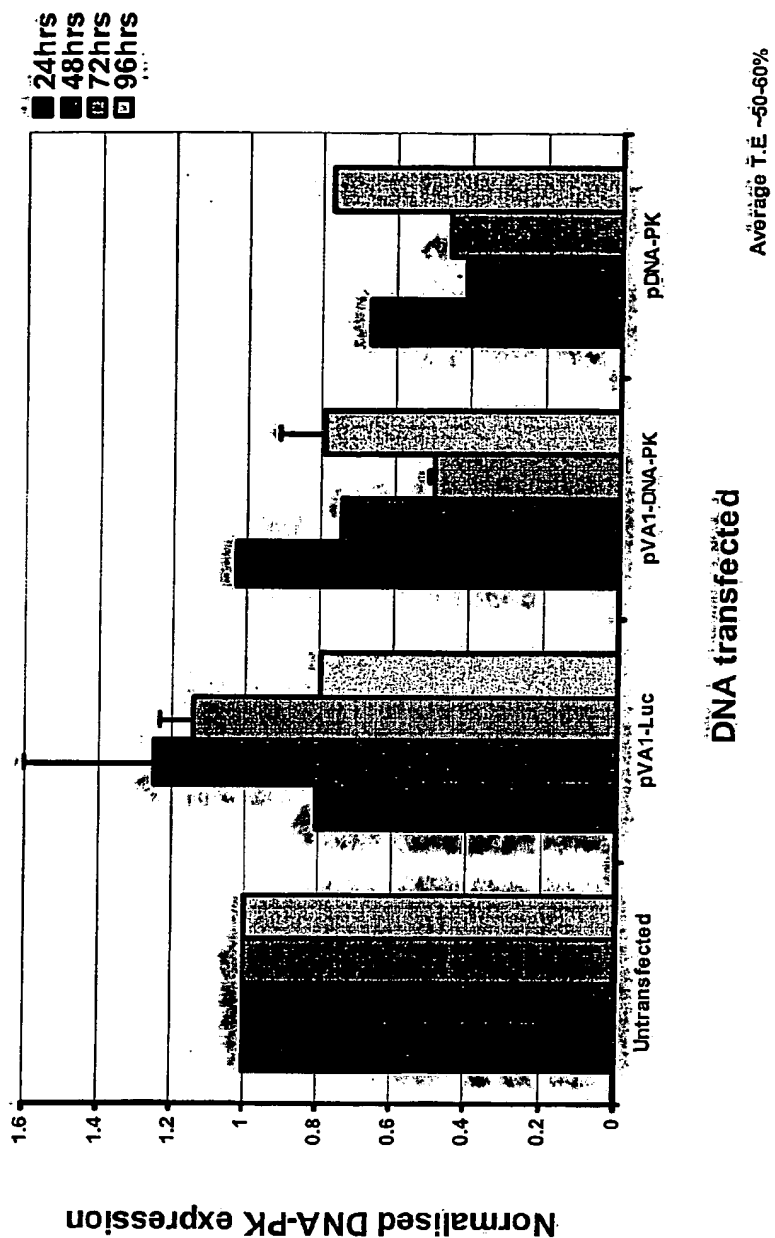


Fig. 11

# VA1 versus U6-mediated down-regulation of DNA-PK in DU 145 cells

DNA-PK expression 72hrs post-transfection

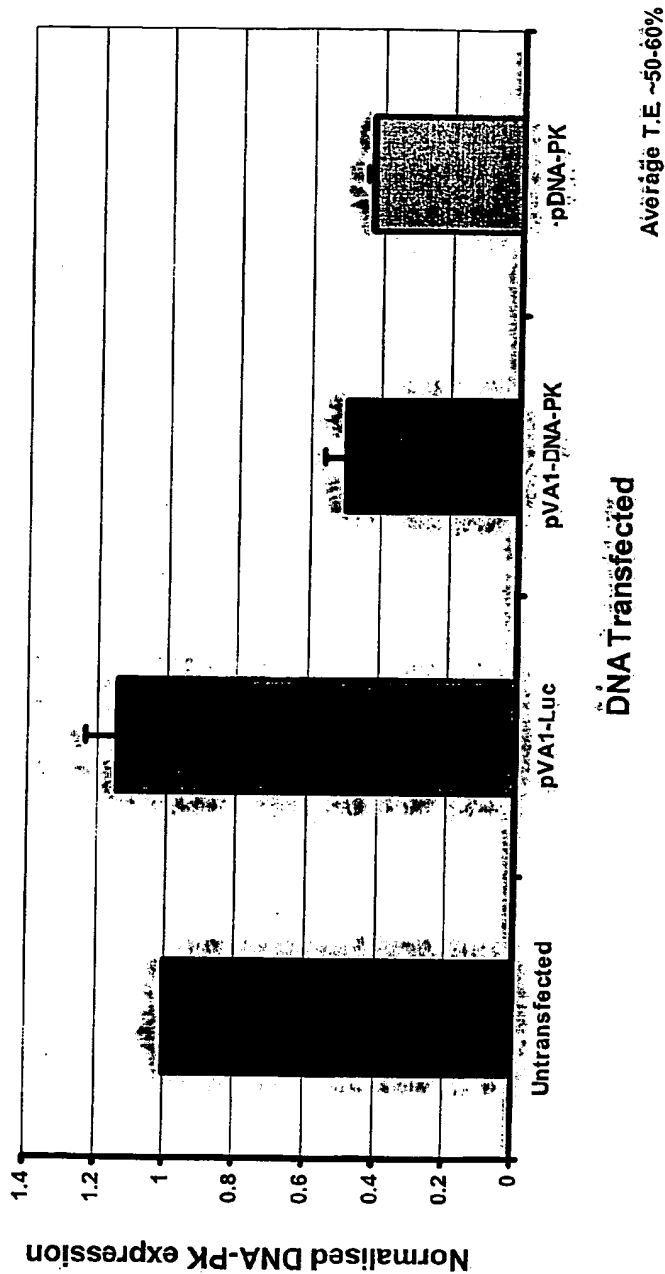


Fig. 12

# VA1-mediated down-regulation of DNA-PK in DU 145 cells (72hrs post-transfection)

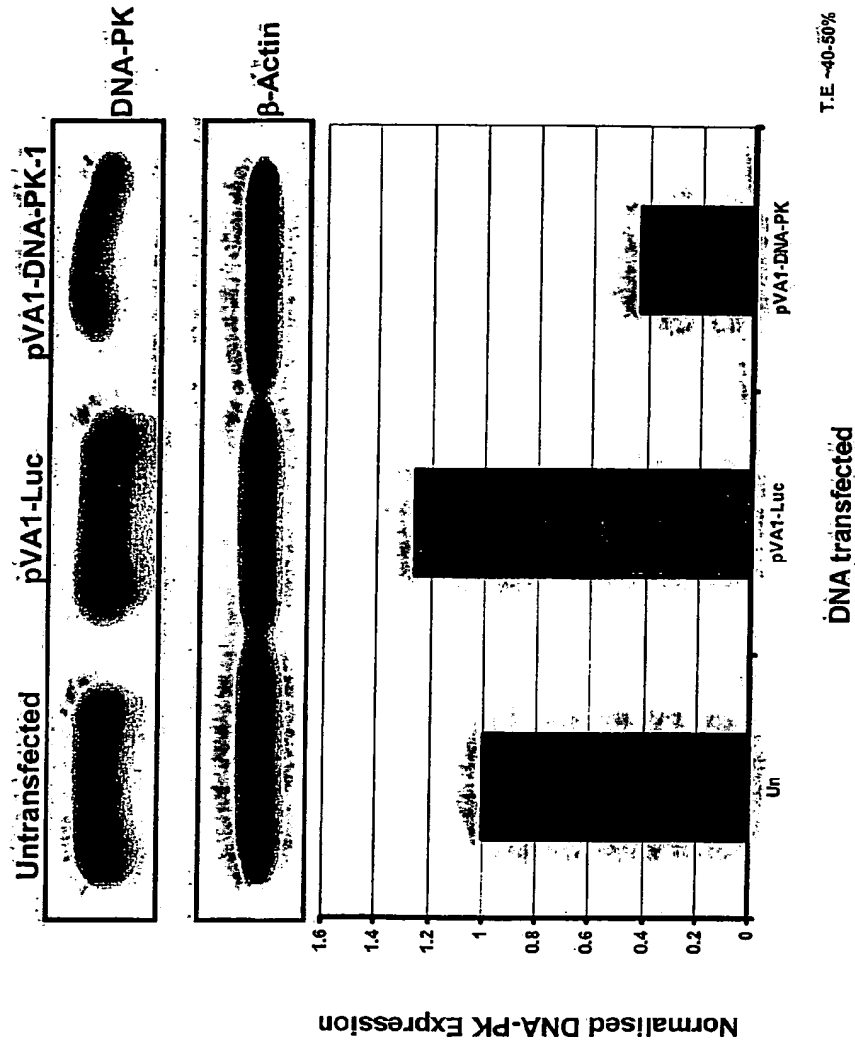
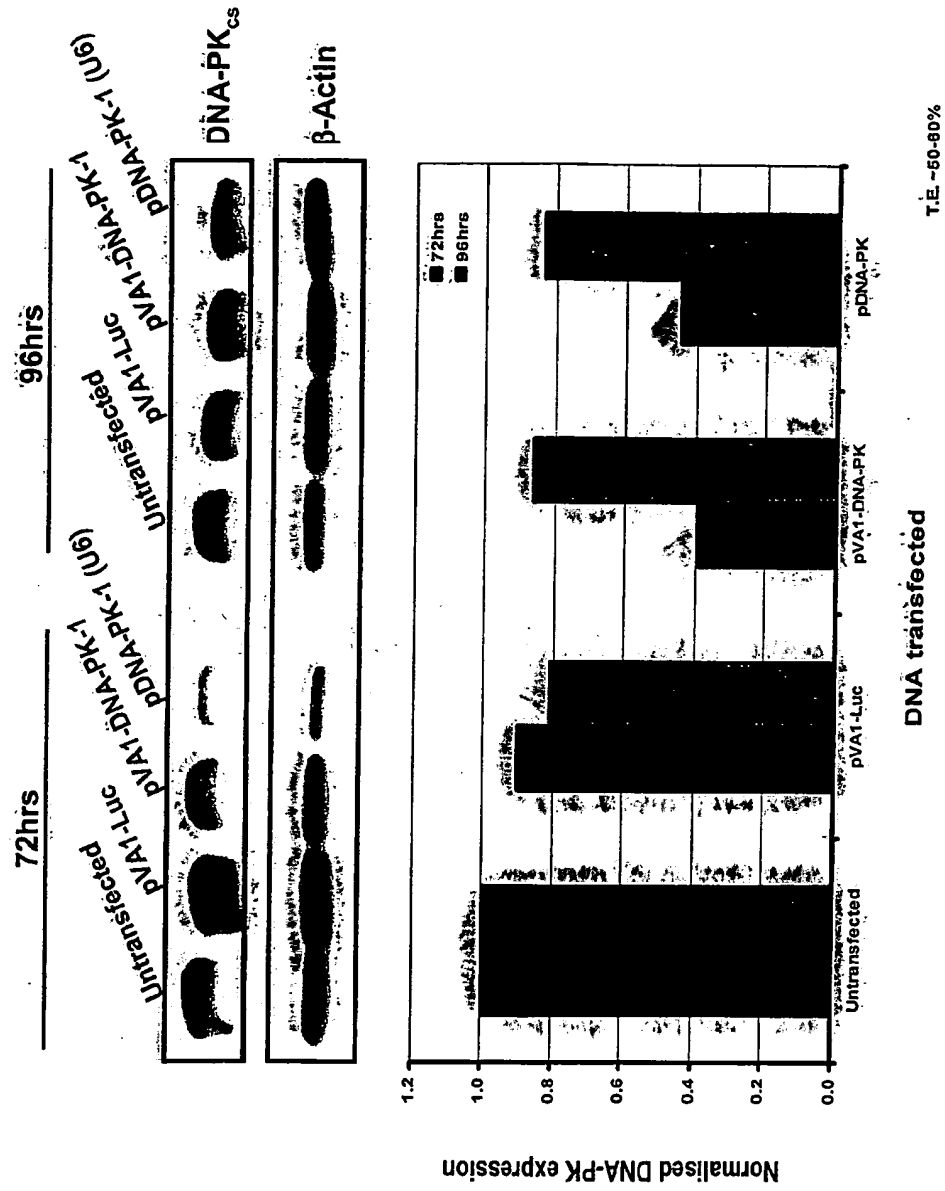


Fig. 13

# VA1 versus U6-mediated down-regulation of DNA-PK in DU 145 cells



**ATM-1 (5'-3')****Oligo-A**

TAGCTCTATCATGTTCTAGTTGACGGCAGAAGCTTGTGCCGTCGACTAGGACATGGTAGAGTTACAGTTTTTT

**Oligo-B**

GATCAAAAACTGTAACCTCTACCATGTCCTAGTCGACGGCACAAGCTTCTGCCGTCAACTAGAACATGATAGAGCTACG

**Target sequence:-**

TGCCGTCAACTAGAACATGATAGAGCTACAG (223-253, ATG = 190)

G/C content = 45%

**Fig. 14**

**ATM-2 (5'-3')**

**Oligo-A**

CCTGGAGGCTTGTGTTGAGGCTGATACAGAAGCTTGTGTATCAGCCTCAGCATAAGCCTCCGGGTAGTTTTT

**Oligo-B**

GATCAAAAACTACCCGGAGGCTTATGCTGAGGCTGATACACAAGCTTCTGTATCAGCCTCAACACAAGCCTCCAGGCG

**Target sequence:-**

TGTATCAGCCTCAACACAAGCCTCCAGGCAG (432-462, ATG = 190)

G/C content = 55%

**Fig. 15**

**ATM-3 (5'- 3')**

**Oligo-A**

TAGTATGTTGCTACAATCAGCTCCGTAAGAAGCTTGTTACGGAGCTGATTGTGGCGACGTATTACTCTTTTTT

**Oligo-B**

GATCAAAAAAGAGTAATACGTCGCCACAATCAGCTCCGTAACAAGCTTCTTACGGAGCTGATTGTAGCAACATACTACG

**Target sequence:-**

TTACGGAGCTGATTGTAGCAACATACTACTC (597-627, ATG = 190)

G/C content = 42%

**Fig. 16**



**ATR-1 (5'-3')****Oligo-A**

TATTATATTCCTCTGGTGTGGCACTGCCGAAGCTTGGGCAGTGTCACTAGAGGGATATAGTACAGTTTTTT

**Oligo-B**

GATCAAAAACTGTACTATATCCCTCTAGTGTGACACTGCCCAAGCTTCGGCAGTGCCACACCAGAGGAATATAATACG

**Target sequence:-**

GGCAGTGCCACACCAGAGGAATATAATACAG (134-164, ATG = 80)

G/C content = 48%

**Fig. 17**

**ATR-2 (5'-3')**

**Oligo-A**

TTGCTGCAATCCGCAGAAGTCTCGTTATGAAGCTTGATAATGAGACTTCTGCGGATTGTAGTAATTCCTTTTT

**Oligo-B**

GATCAAAAAAGAATTACTACAATCCGCAGAAGTCTCATTATCAAGCTTCATAACGAGACTTCTGCGGATTGCAGCAACG

**Target sequence:-**

ATAACGAGACTTCTGCGGATTGCAGCAACC (388-418, ATG = 80)

G/C content = 48%

**Fig. 18**

**ATR-3 (5'-3')**

**Oligo-A**

CTCATGACCACTGGCCATTCCACAGCATGAAGCTTGATGCTGTGGAGTGGCCGGTGGTTATGAGTCGTTTTT

**Oligo-B**

GATCAAAAAACGACTCATAACCCGGCCACTCCACAGCATCAAGCTTCATGCTGTGGAATGGCCAGTGGTCATGAGCG

**Target sequence:-**

ATGCTGTGGAATGGCCAGTGGTCATGAGCCG (579-609, ATG = 80)

G/C content = 58%

**Fig. 19**

**DNA-PK-1 (5'- 3')**

**Oligo-A**

ATGTCTGTAATGCCAGCACCGCGGGGCTGAAGCTTGAGCCTCGTGGTGCTGGTATTACAGATATCTTTTTTTT

**Oligo-B**

GATCAAAAAAAGATATCTGTAATACCAGCACCGAGGCTCAAGCTTCAGCCCCGCGGTGCTGGCATTACAGACATCG

**Target sequence:-**

AGCCCCGCGGTGCTGGCATTACAGACATCTT (196-226, ATG = 58)

G/C content = 58%

**Fig. 20**

**DNA-PK-2 (5'- 3')****Oligo-A**

GATGAACTTCACCCAATAATCCTAGGAGGAAGCTTGCTTCTAGGATTATTGGGTGGAGTCGTCTTATTTTTT

**Oligo-B**

GATCAAAAAATAAGACGAACTCCACCCAATAATCCTAGAAGCAAGCTTCCTCCTAGGATTATTGGGTGAAGTTCATCCG

**Target sequence:-**

CTCCTAGGATTATTGGGTGAAGTTCATCCTA (585-616, ATG = 58)

G/C content = 42%

**Fig. 21**

**DNA-PK-3 (5'- 3')**

**Oligo-A**

TGAAGTTGCACAGAAGTGAGGACAACCCGAAGCTTGGGGTTGTTCTTACTTCTGTGCAGCTTCATTATTTTTT

**Oligo-B**

GATCAAAAAATAATGAAGCTGCACAGAAGTAAGAACAACCCCAAGCTTCGGGTTGTCCTCACTTCTGTGCAACTTCACG

**Target sequence:-**

GGGTTGTCCTCACTTCTGTGCAACTTCACTA (733-763, ATG = 58)

G/C content = 48%

**Fig. 22**

ATM (5'-3')

TAGCTCTATCATGTTCTAGTTGACGGCAX<sub>n</sub>TGCCGTCGACTAGGACATGGTAGAGTTACAGTTTTTT

CCTGGAGGCTTGTGTTGAGGCTGATACAX<sub>n</sub>TGTATCAGCCTCAGCATAAGCCTCCGGGTAGTTTTTT

TAGTATGTTGCTACAATCAGCTCCGTAAX<sub>n</sub>TTACGGAGCTGATTGTGGCGACGTATTACTCTTTTTT

ATR (5'-3')

TATTATATTCCTCTGGTGTGGCACTGCCX<sub>n</sub>GGCAGTGTCACTAGAGGGATATAGTACAGTTTTTT

TTGCTGCAATCCGCAGAAGTCTCGTTATX<sub>n</sub>ATAATGAGACTTCTGCGGATTGTAGTAATCTTTTTT

CTCATGACCACTGGCCATTCCACAGCATX<sub>n</sub>ATGCTGTGGAGTGGCCGGTGGTTATGAGTCGTTTTTT

DNA-PK (5'-3')

ATGTCTGTAATGCCAGCACCGCGGGGCTX<sub>n</sub>AGCCTCGTGGTGCTGGTATTACAGATATCTTTTTTT

GATGAACTTCACCCAATAATCCTAGGAGX<sub>n</sub>CTTCTAGGATTATTGGGTGGAGTTCGTCTTATTTTTT

TGAAGTTGCACAGAAGTGAGGACAACCCX<sub>n</sub>GGGTTGTTCTTACTTCTGTGCAGCTTCATTATTTTTT

**Fig. 23**

**Ad5 VA-1 (Top strand) – Accession No. X02996**

10555 ctcctgg

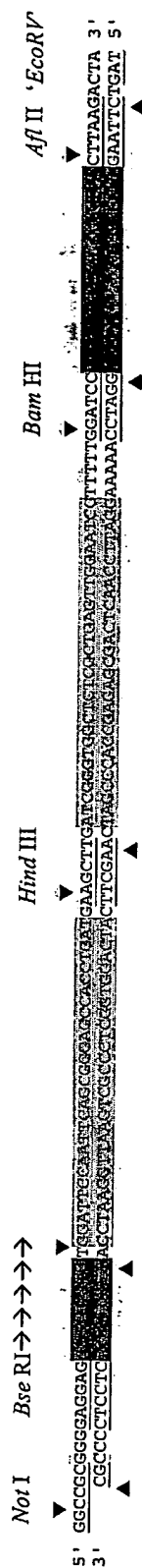
10561 ccggtcaggc gcgcgcaatc gttgacgctc tagaccgtgc aaaaggagag cctgtaagcg

10621 ggcactct [REDACTED] tgg tggataaatt cgcaagggtg tcatggcgga cgaccggggg

10681 tcgagccccg tatccggccg tccgccgtga tccatgcggt taccgccccg gtc

**Variable upstream region****+1 start site****[REDACTED]****B-Box****Fig. 24**





**Luciferase-sRNA**

$$E_{\text{eff}} = E_0 \left( 1 - \frac{1}{2} \frac{v_{\text{eff}}^2}{c^2} \right)$$

10

**Fig. 25**

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